



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,522	11/14/2006	Congqi Li	CU-5003 RJS	9478

26530 7590 12/08/2009
LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER

ANWAR, MOHAMMAD S

ART UNIT	PAPER NUMBER
----------	--------------

2463

MAIL DATE	DELIVERY MODE
-----------	---------------

12/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,522	Applicant(s) LI, CONGQI	
	Examiner MOHAMMAD ANWAR	Art Unit 2463	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9,11 and 21 is/are rejected.
- 7) ☐ Claim(s) 2,4,6,8,10,12,22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Finality

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection. Please see response below:

In response to applicant arguments, However, claim 1 of the present application is to provide a connection switching device for implementing Och-SPRing. It is common knowledge for those skilled in the art that the Och-SPRing is for protecting communications in one ring. However, Waverka is directed to an apparatus for protecting communications between DWDM rings. Accordingly, Waverka teaches away from claim 1 of the present application (see newly cited references Ko and Li et al.).

In response to applicant arguments, In addition, as described in page 2, last paragraph in the background of the present application, an Optical Channel Shared Protection Ring (Och-SPRing), which can be described as follows: a same bi-directional service connection is born by a same pair of optical signals with wavelenqths of lambda 1 and lambda 2 on different segments of a topological ring. The pair of the optical signals ;lambda 1 and lambda 2 are transmitted in two different optical fibers. Their wavelengths are taken as working wavelengths. In addition, another corresponding pair of wavelengths lambda 2 and lambda 1 in the two optical fibers is taken as

Art Unit: 2463

protection wavelengths for the working wavelengths λ_1 and λ_2 ". That is to say, there is only one pair of wavelengths λ_1 and λ_2 in the Och-SPRing. In Waverka, however, multiple pairs of wavelengths are involved. Refer to co1.10, lines 14-17 of Waverka, OADM 230 includes first and second input ports 310 and 315 for accepting light having first and second pluralities of optical wavelengths, respectively, say $\lambda_1 \dots \lambda_m$ and $\lambda_1' \dots \lambda_m'$ ". That is to say, the first plurality of optical wavelengths at least includes λ_1 and λ_2 . And the second plurality of optical wavelengths includes at least λ_1' and λ_2' . As such, at least two pairs of wavelengths λ_1, λ_2 and λ_1', λ_2' are involved in Waverka. Therefore, the feature "a connection switching device for implementing OpticalChannel Shared Protection Ring (Och-SPRing)" of claim 1 is not disclosed by Waverka. (see newly cited references Ko and Li et al.)

Allowable Subject Matter

3. Claims 13-20 are allowed.
4. Claims 2, 4, 6, 8, 10, 12, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2463

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1, 3, 5, 7, 9, 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable by Ko (U.S. Patent No. 7,532,817 B1) in view of Li et al. (U.S. PGPub. No. 2001/0038473 A1).

For claims 1, 5, 9 and 21, Ko et al. disclose a connection switching device for implementing Optical Channel Shared Protection Ring (Och-SPRing), used in a node of an optical network system with a working path and a backup path, comprising: a first switch (see Figure 3, 240) and a second switch (see Figure 3, 265), each of which the first switch and the second switch has two unidirectional input ports (see Figure 3, two ports for each switch 240,235, 260 and 255)) and one unidirectional output port (see Figure 3, 220,215), and one of the input ports of the first switch is connected to the output port of the first switch under the control of the first switch (see Figure 3, SW control, 248), one of the input ports of the second switch is connected to the output port of the second switch under control of the second switch (see Figure 3, SW control 268);

Art Unit: 2463

wherein one input port of the first switch connects to and receives downlink service signals from a downlink direction of the working path (see Figure 3 which shows a working path), the other input port of the first switch connects to and receives the downlink service signals from a downlink direction of the backup path (see Figure 3 which shows a protection path), the other input port of the second switch connects to and receives the downlink service signals from the downlink direction of the backup path (see Figure 3 shows a protection path) and the output port of the second switch connects to an uplink direction of the backup path (see Figure 3, SW control shows a protection path). Ko discloses all the subject matter but fails to mention add/drop functionality of cross bar and optical switches. However, Li et al. from a similar field of endeavor disclose and the output port of the first switch connects and outputs the downlink service signals to a local drop path (see paragraph 8); and the local add path is connected with an uplink the uplink direction of the working path at the same time (see paragraph 8). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Li et al. add/drop functionality into Ko protection scheme. The method can be implemented in an optical switch. The motivation of doing this is to add or drop working and protection channels (see paragraph 10).

For claims 3, 7 and 11, Ko discloses both of the first and the second switches are optical switches; and, the first switch is an electric switch in an Optical Transformation Unit (OTU), and the second switch is an optical switch; and, the first switch is a logical switch, and the second switch is an optical switch (see column 3 lines 25-49).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
Art Unit 2463

/M. A./
Examiner, Art Unit 2463
/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2463